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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------------|------------------------|
| 10/735,769 | 12/16/2003 | Koichi Kawamura | Q79007 | 3973 |
| 23373 7590 11/08/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | EXAMINER CHACKO DAVIS, DABORAH | |
| | | | ART UNIT 1795 | PAPER NUMBER |
| | | | MAIL DATE 11/08/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/735,769

Applicant(s)

KAWAMURA ET AL.

Examiner

Daborah Chacko-Davis

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2007.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some * c) ☐ None of:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/27/2007 has been entered.

Claim Rejections - 35 USC § 102/103

2. Claims 14-23, are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U. S. Patent No. 6,919,158 (Kawamura et al).

Kawamura, in col 5, lines 15-67, in col 6, lines 1-12, in col 7, lines 1-28, in col 17, lines 65-67, in col 18, lines 1-27, and lines 31-60, discloses a pattern formed by exposing a hydrophilic compound formed on a support to radiation so as to form a hydrophilic/hydrophobic pattern that includes regions formed on the support with graft polymers, and regions with no graft polymers; applying a layer of material on the support with the hydrophilic/hydrophobic regions. Kawamura, in col 23, lines 61-67, in col 24, lines 1-35, in col 25, lines 56-67, in col 26, lines 1-10, in col 29, lines 55-67, in col 35, lines 1-26, discloses that the support surface is exposed to irradiation (e-beam, or low energy exposure, image-wise fixed) so as to cause a radical to be generated on the surface of the support causing the surface of the substrate to manifest

polymerization initiating ability, a polymerization initiator containing composition is applied on the support to initiate polymerization on the support surface, at active sites, after which a monomer containing functional group (graft polymer, of positive or negative charge) is made to contact the surface of the support (support having polymerization capability) and undergoing radical polymerization on the support in the presence of a transition metal catalyst (iron salt complex, i.e., atom transfer radical polymerization, ATRP) to form corresponding hydrophilic/hydrophobic pattern (depending on the polarity of the graft polymer) (claims 14-15, 18, 21). Kawamura, in col 18, lines 31-65, discloses that the substance added to the support is a colorant, and or a dye and can be conductive (charge-containing, a polar group), said substance is formed of fine particles (claims 16-17, 19-20, and 22). Kawamura, in col 19, lines 1-51, discloses that the substance can be a conductive polymer comprised of absorbing material (claim 23).

The product by process limitations have been noted. However, it has been held that even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. See *In re Thorpe*, 227 USPQ 964.

Allowable Subject Matter

3. Claims 1-13, are allowable over the prior art of record (U. S. Patent No. 6,919,158 (Kawamura et al). See Remarks, filed August 27, 2007, on page 10, 2nd paragraph, lines 3-6.

Response to Arguments

4. Applicant's arguments, see Remarks, filed August 27, 2007, with respect to claims 1-13 have been fully considered and are persuasive. The 102 rejection made over claims 1-13, has been withdrawn. Applicant's arguments filed August 27, 2007, have been fully considered but they are not persuasive. The 102 rejection made over claims 14-23, in the previous office action (paper no. 20070411) has been maintained.

A) Applicants argue that Kawamura et al., does not disclose a region where an initiator having an ability to initiate polymerization is image-wise fixed over the whole area of the substrate and then image-wise exposing to light to inactivate the polymerization-initiating ability of the initiator in the region exposed to light.

Claims 14, recites a substrate adherence pattern material having inactivated and activated regions, and a graft polymer formed on the region, and a substance formed on the graft polymer. Kawamura teaches a hydrophilic /hydrophobic pattern (corresponding to activated/inactivated regions), forming graft polymer on the regions, and a material applied on the support with the hydrophilic/hydrophobic pattern (activated/inactivated regions). The process limitations in claim 14 is noted. However, when the examiner has found a substantially similar product as in the applied prior art,

the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

The disclosed product of Kawamura et al., and the instantly claimed product appear to be essentially the same, comprised of the same components, a support with a hydrophilic/hydrophobic pattern, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims 14-23, as opposed to the product taught by Kawamura et al., such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd

A handwritten signature in black ink, appearing to read "Deborah Charles", written over a horizontal line.

November 6, 2007.